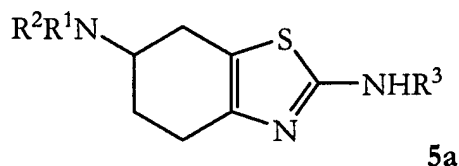


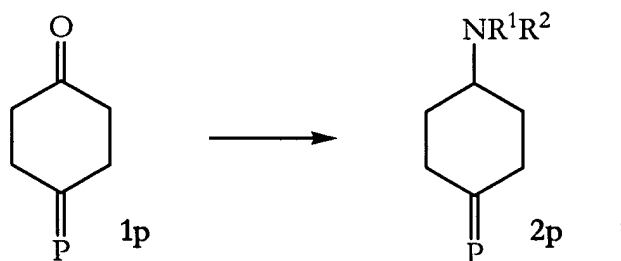
IN THE CLAIMS

1. (Currently amended) A process for the preparation of a 2-amino-4,5,6,7-tetrahydro-6-aminobenzothiazole **5a**:



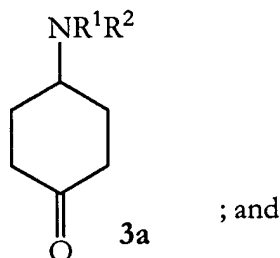
or an enantiomer or a salt thereof, comprising the steps of:

- (a) reductively aminating a protected cyclohexandione **1p** with an amine R^1R^2NH to yield a protected 4-amino-cyclohexanone **2p**:



wherein P is a protected ketone functionality, and R^1 and R^2 ~~are any atom or group or, together with the nitrogen to which they are attached, form a ring~~ R^1 and R^2 are independently hydrogen or a C_1 - C_{12} alkyl, C_2 - C_{12} alkenyl, C_2 - C_{12} alkynyl, C_4 - C_{14} aryl, $(C_4$ - $C_{14})$ aryl(C_1 - C_{12})alkyl, $(C_4$ - $C_{14})$ aryl(C_2 - C_{12})alkenyl, $(C_4$ - $C_{14})$ aryl(C_2 - C_{12})alkynyl, $(C_1$ - $C_{12})$ alkyl(C_4 - $C_{14})$ aryl, $(C_2$ - $C_{12})$ alkenyl(C_4 - $C_{14})$ aryl or $(C_2$ - $C_{12})$ alkynyl(C_4 - $C_{14})$ aryl group, which may be unsubstituted or substituted with one or more of -F, -Cl, -Br, -I, -CF₃, -CCl₃, -CBr₃, -Cl₃, -OH, -SH, -NH₂, -CN, -NO₂, -COOH, -R'-O-R'', -R'-S-R'', -R'-SO-R'', -R'-SO₂-R'', -R'-SO₂-OR'', -R'O-SO₂-R'', -R'-SO₂-N(R'')₂, -R'-NR''-SO₂-R'', -R'O-SO₂-OR'', -R'O-SO₂-N(R'')₂, -R'-NR''-SO₂-OR'', -R'-NR''-SO₂-N(R'')₂, -R'-N(R'')₂, -R'-N(R'')₃⁺, -R'-P(R'')₂, -R'-Si(R'')₃, -R'-CO-R'', -R'-CO-OR'', -R'O-CO-R'', -R'-CO-N(R'')₂, -R'-NR''-CO-R'', -R'O-CO-OR'', -R'O-CO-N(R'')₂, -R'-NR''-CO-OR'', -R'-NR''-CO-N(R'')₂, -R'-CS-R'', -R'-CS-OR'', -R'O-CS-R'', -R'-CS-N(R'')₂, -R'-NR''-CS-R'', -R'O-CS-OR'', -R'O-CS-N(R'')₂, -R'-NR''-CS-OR'', -R'-NR''-CS-N(R'')₂ or -R'', or together with the nitrogen to which they are attached, R^1 and R^2 form a ring;

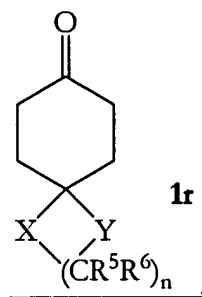
(b) deprotecting the protected 4-amino-cyclohexanone **2p** to yield an unprotected 4-amino-cyclohexanone **3a**;



(c) treating the unprotected 4-amino-cyclohexanone **3a** with iodine and a substituted-thiourea $\text{H}_2\text{N}(\text{C}=\text{S})\text{NHR}^3$, wherein R^3 is ~~any atom or group~~ hydrogen or a $\text{C}_1\text{-C}_{12}$ alkyl, $\text{C}_2\text{-C}_{12}$ alkenyl, $\text{C}_2\text{-C}_{12}$ alkynyl, $\text{C}_4\text{-C}_{14}$ aryl, $(\text{C}_4\text{-C}_{14})\text{aryl}(\text{C}_1\text{-C}_{12})\text{alkyl}$, $(\text{C}_4\text{-C}_{14})\text{aryl}(\text{C}_2\text{-C}_{12})\text{alkenyl}$, $(\text{C}_4\text{-C}_{14})\text{aryl}(\text{C}_2\text{-C}_{12})\text{alkynyl}$, $(\text{C}_1\text{-C}_{12})\text{alkyl}(\text{C}_4\text{-C}_{14})\text{aryl}$, $(\text{C}_2\text{-C}_{12})\text{alkenyl}(\text{C}_4\text{-C}_{14})\text{aryl}$ or $(\text{C}_2\text{-C}_{12})\text{alkynyl}(\text{C}_4\text{-C}_{14})\text{aryl}$ group, which may be unsubstituted or substituted with one or more of -F, -Cl, -Br, -I, -CF₃, -CCl₃, -CBr₃, -Cl₃, -OH, -SH, -NH₂, -CN, -NO₂, -COOH, -R'-O-R'', -R'-S-R'', -R'-SO-R'', -R'-SO₂-R'', -R'-SO₂-OR'', -R'O-SO₂-R'', -R'-SO₂-N(R'')₂, -R'-NR''-SO₂-R'', -R'O-SO₂-OR'', -R'O-SO₂-N(R'')₂, -R'-NR''-SO₂-OR'', -R'-NR''-SO₂-N(R'')₂, -R'-N(R'')₂, -R'-N(R'')₃⁺, -R'-P(R'')₂, -R'-Si(R'')₃, -R'-CO-R'', -R'-CO-OR'', -R'O-CO-R'', -R'-CO-N(R'')₂, -R'-NR''-CO-R'', -R'O-CO-OR'', -R'O-CO-N(R'')₂, -R'-NR''-CO-OR'', -R'-NR''-CO-N(R'')₂, -R'-CS-R'', -R'-CS-OR'', -R'O-CS-R'', -R'-CS-N(R'')₂, -R'-NR''-CS-R'', -R'O-CS-OR'', -R'O-CS-N(R'')₂, -R'-NR''-CS-OR'', -R'-NR''-CS-N(R'')₂ or -R'', to yield the 2-amino-4,5,6,7-tetrahydro-6-aminobenzothiazole **5a** or an enantiomer or a salt thereof;

wherein -R'- is independently a chemical bond, a $\text{C}_1\text{-C}_{10}$ alkylene, $\text{C}_1\text{-C}_{10}$ alkenylene or $\text{C}_1\text{-C}_{10}$ alkynylene group, and -R'' is independently hydrogen, unsubstituted $\text{C}_1\text{-C}_6$ alkyl or unsubstituted $\text{C}_6\text{-C}_{10}$ aryl.

2. (Currently amended) A process as claimed in claim 1, wherein ~~[[P]]~~the protected cyclohexandione **1p** is a cyclic ketal **1r**;



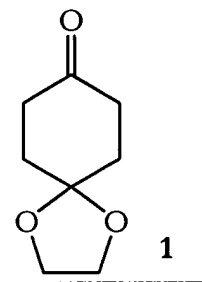
wherein:

X and Y are independently O, S, NR⁷ or Se;

n is 2 or 3;

R⁵ and R⁶ are independently hydrogen, halide, or an optionally substituted alkyl, alkenyl, alkynyl, aryl, arylalkyl, arylalkenyl, arylalkynyl, alkylaryl, alkenylaryl or alkynylaryl group, which may include one or more heteroatoms N, O or S in its carbon skeleton; and
R⁷ is hydrogen or alkyl.

3. (Currently amended) A process as claimed in claim [[2]]1, wherein [[P]]the protected cyclohexandione **1p** is a monoethyleneketal **1**:



4. (Currently amended) A process as claimed in [[-]]claim 1, wherein R¹, R² and R³ are independently hydrogen or an optionally substituted ~~alkyl, alkenyl, alkynyl, aryl, arylalkyl, arylalkenyl, arylalkynyl, alkylaryl, alkenylaryl or alkynylaryl group, C₁-C₁₂ alkyl, C₂-C₁₂ alkenyl, C₂-C₁₂ alkynyl, C₄-C₁₄ aryl, (C₄-C₁₄)aryl(C₁-C₁₂)alkyl, (C₄-C₁₄)aryl(C₂-C₁₂)alkenyl, (C₄-C₁₄)aryl(C₂-C₁₂)alkynyl, (C₁-C₁₂)alkyl(C₄-C₁₄)aryl, (C₂-C₁₂)alkenyl(C₄-C₁₄)aryl or (C₂-C₁₂)alkynyl(C₄-C₁₄)aryl group~~ which may include one or more heteroatoms N, O or S in its carbon skeleton.

5. (Currently amended) A process as claimed in claim 1, wherein R¹, R² and R³ are independently hydrogen or an unsubstituted ~~alkyl, aryl~~ C₁-C₁₂ alkyl, C₄-C₁₄ aryl, or heteroaryl group, ~~which does not include any heteroatoms N, O or S in its carbon skeleton.~~

6. (Currently amended) A process as claimed in claim 1, wherein one of R¹ and R² is hydrogen and the other of R¹ and R² is an optionally substituted ~~alkyl, alkenyl, alkynyl, aryl, arylalkyl, arylalkenyl, arylalkynyl, alkylaryl, alkenylaryl or alkynylaryl group, C₁-C₁₂ alkyl, C₂-C₁₂ alkenyl, C₂-C₁₂ alkynyl, C₄-C₁₄ aryl, (C₄-C₁₄)aryl(C₁-C₁₂)alkyl, (C₄-C₁₄)aryl(C₂-C₁₂)alkenyl, (C₄-C₁₄)aryl(C₂-C₁₂)alkynyl, (C₁-C₁₂)alkyl(C₄-C₁₄)aryl, (C₂-C₁₂)alkenyl(C₄-C₁₄)aryl or (C₂-C₁₂)alkynyl(C₄-C₁₄)aryl group~~ which may include one or more heteroatoms N, O or S in its carbon skeleton.

7. (Original) A process as claimed in claim 6, wherein one of R¹ and R² is hydrogen and the other of R¹ and R² is *n*-propyl.

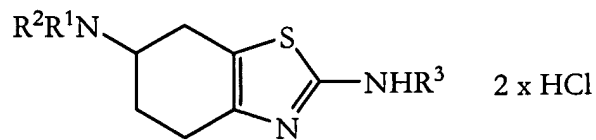
8. (Original) A process as claimed in claim 1, wherein R³ is hydrogen.

9. (Original) A process as claimed in claim 1, wherein the reductive amination of step (a) is carried out with NaCNBH₃.

10-25. (Cancelled)

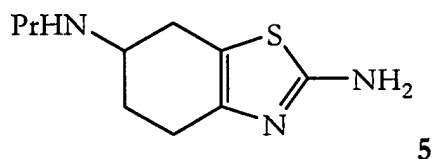
26. (New) A process as claimed in claim 1, wherein the 2-amino-4,5,6,7-tetrahydro-6-aminobenzothiazole **5a** comprises at least 95% of the (R)- or the (S)-enantiomer.

27. (New) A process as claimed in claim 1, for the preparation of a 2-amino-4,5,6,7-tetrahydro-6-aminobenzothiazole di-hydrochloric acid salt:



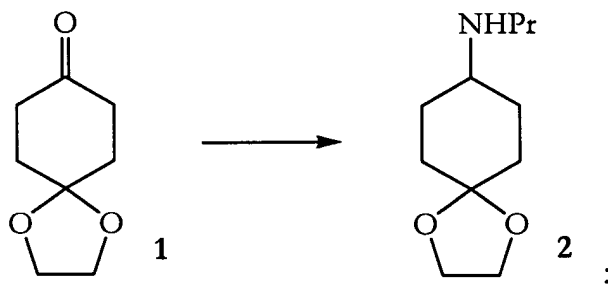
or an enantiomer thereof.

28. (New) A process for the preparation of 2-amino-4,5,6,7-tetrahydro-6-(propylamino)-benzothiazole **5**:

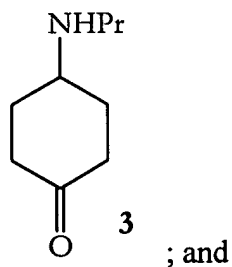


or an enantiomer or a salt thereof, comprising the steps of:

(a) reductively aminating cyclohexandione monoethyleneketal **1** with PrNH₂ to yield 4-*n*-propylamino-cyclohexanone-ethyleneketal **2**:

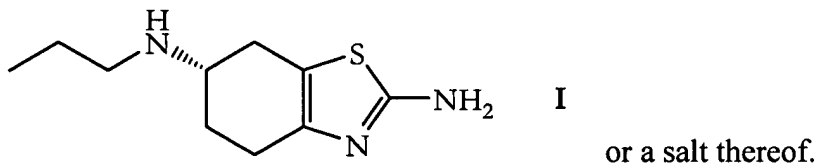


(b) deprotecting 4-*n*-propylamino-cyclohexanone-ethyleneketal **2** to yield 4-*n*-propylamino-cyclohexanone **3**:

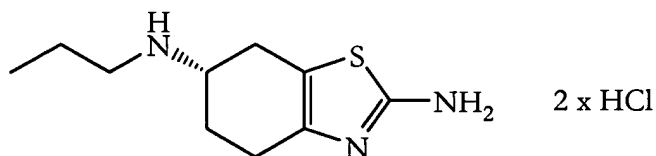


(c) treating 4-*n*-propylamino-cyclohexanone **3** with iodine and thiourea.

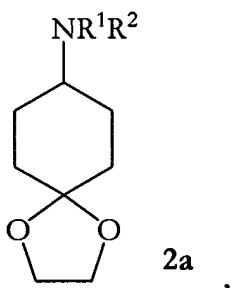
29. (New) A process as claimed in claim 28, for the preparation of (S)-2-amino-4,5,6,7-tetrahydro-6-(propylamino)-benzothiazole **I**:



30. (New) A process as claimed in claim 28, for the preparation of (S)-2-amino-4,5,6,7-tetrahydro-6-(propylamino)-benzothiazole di-hydrochloric acid salt:



31. (New) A 4-amino-cyclohexanone-ethyleneketal **2a**:



wherein one of R^1 and R^2 is hydrogen and the other of R^1 and R^2 is a C_1 - C_6 alkyl group.

32. (New) A compound as claimed in claim 31, wherein one of R^1 and R^2 is hydrogen and the other of R^1 and R^2 is *n*-propyl.